

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (currently amended) A method of modulation of a carrier, in particular an RF carrier, in which two quadrature components I and Q are generated and a local frequency is vectorially modulated with these components, comprising [wherein]:

signals I and Q [I/Q] are filtered around the zero frequency so as to create a small free frequency bands,

into this small free frequency band are inserted alternately into the signal I and into the signal Q a low-frequency subcarrier sufficiently remote from zero as not to engender any shift error of the continuous component and of a sufficiently low relative level with respect to that of the signal I and Q [I/Q] as not to disturb the latter,

a fraction of the vectorially modulated signal is demodulated in a synchronous manner with the same local frequency alternately cosine-wise and sine-wise,

a low-pass filtering is carried out on the demodulation signal so as to extract the subcarrier marred by amplitude and phase errors corresponding successively to the amplitude and phase errors with which the signals I and Q are marred after the vector modulation,

these amplitude and phase errors are measured; and

the initial components I and Q are feedback-corrected on the basis of these measurements so as to compensate for these errors.

2 (original) The method of claim 1, wherein all the operations, with the exception of the vector modulation, of the generation of the local frequency, of the demodulation and of the low-pass filter, are performed digitally.

3 (original) The method of claim 1, wherein the generation of the local frequency is done by the addition to an RF frequency of a reference frequency F1 low enough to be generated digitally sine-wise and cosine-wise.

4 (currently amended) A device for modulating a carrier, in particular an RF carrier, comprising:

- a digital processor for generating two quadrature components I and Q,
- a local base frequency generator,
- a vector modulator for modulating this local frequency by these two components,
- means of filtering of the signals I and Q [I/Q] around the zero frequency,
- a generator of a low-frequency subcarrier,
- means for inserting this subcarrier alternately into the signal I and into the signal Q,
- means for demodulating a fraction of the output signal from the vector modulator with the local frequency in a synchronous manner alternately cosine-wise and sine-wise,
- a filter for extracting the subcarrier marred by amplitude and phase errors from the demodulated signal,
- means for measuring these amplitude and phase errors, and
- means for correcting the initial components I and Q on the basis of these measurements so as to compensate for these errors.

5 (original) The device of claim 4, which further comprises: means for generating a complementary local frequency low enough to be processed by the digital processor, means for adding this complementary local frequency to the base local frequency, means for digitally phase-shifting alternately cosine-wise and sine-wise the said complementary local frequency useful for demodulation, means for adding this local frequency thus phase-shifted to the base local frequency so as to energize the means of synchronous demodulation.